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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/584,314

05/23/2007

Yukitaka Hayakawa

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12/23/2010

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EXAMINER

CHARLES, MARCUS

ART UNIT

PAPER NUMBER

3656

NOTIFICATION DATE

DELIVERY MODE

12/23/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/584,314	<b>Applicant(s)</b> HAYAKAWA ET AL.	
	<b>Examiner</b> Marcus Charles	<b>Art Unit</b> 3656	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 9-23-2010 and 10-25-2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 5-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input checked="" type="checkbox"/> Other: <u>Translation of JP 2003-322136</u>      |

### **DETAILED ACTION**

This action is responsive to the amendment filed 9-23-2010 and RCE filed 10-25-2010, which has been entered. Claims 1-3 and 5-20 are currently pending.

#### ***Continued Examination Under 37 CFR 1.114***

1. The request filed on 10-25-2010 for a Request for Continued Examination (RCE) under 37 CFR 1.114 based on parent Application No.10/584,314 is acceptable and a RCE has been established. An action on the RCE follows:

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 6-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takehana et al. (6,851,859) in view JP (2003-322136). Takehana et al. discloses a hydrodynamic bearing device comprising a shaft (30) member; a radially bearing portion (60) having a radial bearing gap (see 63) formed around an outer circumference of the shaft and supporting the shaft member in the radial direction in a non-contact manner by an action of dynamic pressure of fluid in the radial bearing gap; the shaft member has a guide face serving as a guide when a thrust ring (33) is pre fitted unto the shaft (30). Takehana et al. fail to disclose shaft having a tapered guide face and the guide face has a blunting portion formed between guide surface and the outer circumferential

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surface of the shaft member, wherein the blunting portion being a curve surface that is smoothly continuous to the guide face and the outer circumferential of the shaft member surface. JP (2003-322136) power transmission device (figs. 5/6) comprising a shaft member (15) having an end surface serving as a tapered guide surface area (20/21), a blunting portion (20a) formed between the tapered guide surface and the outer circumferential surface of the shaft section, wherein the blunting portion is formed at a boundary in a shape of a curved that is smoothly continuous from the guide face to the outer circumferential to reduce weight, material cost and frictional resistance to insertion of the shaft. Therefore, it would have been obvious to one of ordinary skill in the art at the time to modify the shaft of Takehana et al. so that it includes a tapered guide face and including a blunting portion which is a curved surface that is smoothly continuous from a guide face to the outer circumferential surface in view of JP (2003-322136) in order to for allowing the shaft easy access through the bearing hole and to prevent burring at the edge of the shaft after assembling. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the top surface of the shaft of Takehana et al. so that it has a blunted portion in view of Mori et al. in order to allow for smooth entry and uninterrupted guidance onto the shaft and to reduce weight, material cost and frictional resistance to insertion of the shaft. In addition, the combination of Takehana et al. and JP (2003-322136) fail to disclose the forming a coaxial grinding surface with the guide face, the blunting surface and the outer circumferential surface of the shaft. It is well known in the art that forming a coaxial grinding surface on varying shaped surface provides a uniform balance surface.

Therefore, one of ordinary skill in the art at the time of the invention would be able to provide for a coaxial grinding surface as claimed for providing a uniform balance surface.

In claims 8-9, note the blunting portion of JP (2003-322136) has a curved surface.

In claims 5, 10-12 and 14-18 note Takehana et al. discloses the member (50) holding the disc (D).

In claims 6, 13-16 and 19-20 Takehana et al. disclose the claimed invention in fig. 1.

Regarding claims 2-3, the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight. In addition, grinding is a well known process for rounding of edges.

In claim 7, the method steps are inherently included during the manufacturing of Takehana et al. and JP (2003-322136) device. The combination of Takehana et al. and JP (2003-322136) fails to disclose the simultaneously grinding the guide face and outer circumferential surface of the shaft member. The method of simultaneously grinding two surfaces is well known in the art. Therefore, one of ordinary skill in the art at the time of the invention to simultaneously grinding the guide surface, the outer circumferential surface of the shaft and a boundary portion between the guide face and

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the outer circumferential surface of JP (2003-322136), since such a method is well known for providing a uniform balance surface.

***Response to Arguments***

3. Applicant's arguments with respect to claims 1-3 and 6-20 have been considered but are moot in view of the new ground(s) of rejection.

***Citation***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Note the prior art cited in attached PTO Form 892.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (571) 272-7101. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ridley Richard can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Marcus Charles*

/Marcus Charles/

Primary Examiner, Art Unit 3656